1. (Once Amended) An isolated polypeptide selected from the group consisting of:

a) a polypeptide comprising the amino acid sequence of SEQ ID NO:1,

b) a polypeptide comprising a naturally occurring amino acid sequence at least 95% identical to the amino acid sequence of SEQ ID NO:1, wherein the polypeptide has adenylate kinase activity, and

c) a fragment of a polypeptide having the amino acid sequence of SEQ ID NO:1, wherein the fragment has adenylate kinase activity, and wherein the fragment comprises residues R6 through V23 of SEQ ID NO:1.

3. An isolated polynucleotide encoding a polypeptide of claim 1.

9. A method for producing a polypeptide of claim 1, the method comprising:

a) culturing a cell under conditions suitable for expression of the polypeptide, wherein said cell is transformed with a recombinant polynucleotide, and said recombinant polynucleotide comprises a promoter sequence operably linked to a polynucleotide encoding the polypeptide of claim 1, and

b) recovering the polypeptide so expressed.

10. A method of claim 9, wherein the polypeptide has the sequence of SEQ ID NO:1.

17. A composition comprising a polypeptide of claim 1 and a pharmaceutically acceptable excipient.

18. A composition of claim 17, wherein the polypeptide has an amino acid sequence of SEQ ID NO:1.

20. A method for screening a compound for effectiveness as an agonist of a polypeptide of claim 1, the method comprising:

a) exposing a sample comprising a polypeptide of claim 1 to a compound, and

b) detecting agonist activity in the sample.

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56. (New) An isolated polypeptide comprising the amino acid sequence of SEQ ID NO:1.

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57. (New) An isolated polypeptide of claim 1, wherein the polypeptide comprises a naturally occurring amino acid sequence at least 95% identical to the amino acid sequence of SEQ ID NO:1, and wherein the polypeptide has adenylate kinase activity.

58. (New) An isolated polypeptide of claim 1, wherein the polypeptide is a fragment of a polypeptide having the amino acid sequence of SEQ ID NO:1, and wherein the polypeptide has adenylate kinase activity, and wherein the polypeptide comprises residues R6 through V23 of SEQ ID NO:1.

59. (New) A composition comprising the polypeptide of claim 56 and a pharmaceutically acceptable excipient.

60. (New) A composition comprising the polypeptide of claim 57 and a pharmaceutically acceptable excipient.

61. (New) A composition comprising the polypeptide of claim 58 and a pharmaceutically acceptable excipient.

62. (New) A method of screening a compound for effectiveness as an antagonist of a polypeptide of claim 1, the method comprising:

a) exposing a sample comprising a polypeptide of claim 1 to a compound, and

b) detecting antagonist activity in the sample.

63. (New) A method of screening for a compound that specifically binds to the polypeptide of claim 1, the method comprising:

a) combining the polypeptide of claim 1 with at least one test compound under suitable conditions, and

b) detecting binding of the polypeptide of claim 1 to the test compound, thereby identifying a compound that specifically binds to the polypeptide of claim 1.

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64. (New) A method of screening for a compound that modulates the activity of the polypeptide of claim 1, the method comprising:

a) combining the polypeptide of claim 1 with at least one test compound under conditions permissive for the activity of the polypeptide of claim 1,

b) assessing the activity of the polypeptide of claim 1 in the presence of the test compound, and

c) comparing the activity of the polypeptide of claim 1 in the presence of the test compound with the activity of the polypeptide of claim 1 in the absence of the test compound, wherein a change in the activity of the polypeptide of claim 1 in the presence of the test compound is indicative of a compound that modulates the activity of the polypeptide of claim 1.

65. (New) A method of preparing a polyclonal antibody which specifically binds to the polypeptide of claim 1, the method comprising:

a) immunizing an animal with a polypeptide consisting of the amino acid sequence of SEQ ID NO:1, or an immunogenic fragment thereof, under conditions to elicit an antibody response,

b) isolating antibodies from the animal, and

c) screening the isolated antibodies with the polypeptide of claim 1, thereby identifying a polyclonal antibody which specifically binds to the polypeptide of claim 1.

66. (New) A method of making a monoclonal antibody which specifically binds to the polypeptide of claim 1, the method comprising:

a) immunizing an animal with a polypeptide consisting of the amino acid sequence of SEQ ID

NO:1, or an immunogenic fragment thereof, under conditions to elicit an antibody response,

b) isolating antibody producing cells from the animal,

c) fusing the antibody producing cells with immortalized cells to form monoclonal antibody-producing hybridoma cells,

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d) culturing the hybridoma cells, and

e) isolating from the culture monoclonal antibody which specifically binds to the polypeptide of claim 1.

67. (New) A method of detecting the polypeptide of claim 1 in a sample, the method comprising:

a) incubating an antibody which specifically binds to the polypeptide of claim 1 with the sample under conditions to allow specific binding of the antibody and the polypeptide, and

b) detecting specific binding, wherein specific binding indicates the presence of the polypeptide of claim 1 in the sample.

68. (New) A method of purifying the polypeptide of claim 1 from a sample, the method comprising:

a) incubating an antibody which specifically binds to the polypeptide of claim 1 with the sample under conditions to allow specific binding of the antibody and the polypeptide, and

b) separating the antibody from the sample and obtaining the purified polypeptide of claim 1.